

REMARKS

Claims 1-66 are pending in the application. Claims 1-66 stand rejected. No new matter is being introduced by way of these remarks.

Claims 1-66 are being rejected under 35 U.S.C. 102(b) as being anticipated by Yoshikawa et al. (Skewless Optical Data-Link Subsystem for Massively Parallel Processors Using 8 Gb/s X 1.1 Gb/s MMF Array Optical Module) (hereinafter “Yoshikawa”).

Before discussing the specifics of the rejection, Applicants believe a brief description of the present invention as claimed in claim 1 and cited reference may be useful.

As recited in Claim 1, an embodiment of Applicants’ invention includes “a first de-skewing processor to overwrite a frame marker on the SONET/SDH frames with a unique frame maker to aid in de-skewing the plurality of data channels.” In an embodiment discussed at page 7, lines 20-23 of the specification as originally filed, each channel is encoded, and certain SONET framing bytes on each channel are overwritten with a frame marker consisting of characters defined for the code. The frame markers aid de-skewing circuitry at the receiver end as framing allows the receiver to realign the frames.

In contrast, Yoshikawa provides a data link subsystem containing a sync pattern for compensating skew (Yoshikawa, page 1625; Fig. 1). In particular, Yoshikawa compensates for skew using an inserted sync pattern (K28.5-characters), which is generated in 8b10b coding. When the sync pattern is detected, Yoshikawa compares detection timing with that of a master channel and then performs a de-skew operation. Yoshikawa performs the deskew operation using a first-in-first-out (FIFO) memory to output data synchronous to the master channel as shown in Fig. 3 (Yoshikawa, page 1626, lines 12-17). However, using the inserted sync pattern to compensate for skew is not the same as having a de-skewing processor to overwrite a frame marker, as claimed by Applicants in claim 1. Moreover, Yoshikawa does not discuss the concept of a frame marker, so he does not teach or suggest overwriting a frame marker to aid in deskewing data channels.

Accordingly, because Yoshikawa does not teach every claim limitation of Applicants’ Claim 1 (“*a first de-skewing processor to overwrite a frame marker on the SONET/SDH frames with a unique frame maker to aid in de-skewing the plurality of data channels*”), Applicants

respectfully submit that the rejection under 35 U.S.C. 102(b) as being anticipated by Yoshikawa should be withdrawn.

For at least the same reasons, dependent Claims 2-5 should be allowable under 35 U.S.C. 102(b) against Yoshikawa.

Independent Claims 6, 16, 17, 29, and 38 have similar limitations and should be allowable for the reasons presented above.

For at least the same reasons, dependent claims 7-15, 18-28, 30-37, and 39-54 should be allowable under 35 U.S.C. 102(b) over Yoshikawa.

Even though Independent claim 55 does not overwrite a frame marker as in claim 1, claim 55 is not anticipated by Yoshikawa under 35 U.S.C. 102(b). More specifically, Yoshikawa compares detection timing with that of a master channel and then performs a de-skew operation. In this way, Yoshikawa compares detection timing with the master channel and ignores incoming frames of data. Since Yoshikawa ignores incoming frames of data, Yoshikawa cannot have a demultiplexer to map incoming frames of data having a given number of bits onto a plurality of data channels, as claimed by Applicants in claim 55. Accordingly, Yoshikawa does not teach every claim limitation of Applicants' claim 55 ("*a demultiplexer to map incoming frames of data having a given number of bits onto a plurality of data channels*"), so Applicants respectfully submit that the rejection under 35 U.S.C. 102(b) as being anticipated by Yoshikawa should be withdrawn.

Independent Claim 60 has a similar limitation and should be allowable for the reasons presented above.

For at least the same reasons, as their respective base claims 55 and 60 dependent claims 56-59 and 61-66 should be allowable under 35 U.S.C. 102(b) over Yoshikawa.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims (claims 1-66) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Mark B. Solomon

Mark B. Solomon

Registration No. 44,348

Telephone: (978) 341-0036

Facsimile: (978) 341-0136

Concord, MA 01742-9133

Dated: 6/30/06